

IN THE CLAIMS

Please amend the claims as follows:

Listing of Claims

Claims 1-10 (Cancelled).

11. (Currently Amended) A direct conversion reception apparatus for use in a system where transmit power varies between transmission signals by downlink transmit power control, the apparatus comprising:

a reception quality measurement section that measures ~~finds~~ reception quality of a first signal of an earlier received ~~[[a]]~~ frame that is comprised of a plurality of time slots ~~and has been received earlier~~, the reception quality being measured ~~found~~ on a per time slot basis;

a gain estimation section that estimates gains for amplifying a second signal of a later received frame, the gains being estimated on a per time slot basis, before a reception period of the later received frame, based on the reception quality of individual time slots measured by ~~found in~~ the reception quality measurement section, ~~gains for amplifying a signal of a frame that is going to be received, and the second signal being amplified to a predetermined reference value, before a reception period of the signal that is going to be received, the gains being estimated on a~~ per time slot basis;

a gain control section that selects, on a per frame basis, a maximum gain ~~in a same frame~~, from the gains of individual time slots estimated by ~~in~~ the gain estimation section, and, ~~using the~~

gains of individual time slots, performs gain control, on a per time slot basis, during the reception period of the later received frame ~~that is going to be received, on a per time slot basis~~; and

a voltage calibration section that calibrates an offset voltage of the second signal of the later received frame ~~that is going to be received~~, on a per frame basis, before the reception period of the later received frame ~~that is going to be received~~, using a calibration value matching the maximum gain selected by ~~in~~ the gain control section.

12. (Currently Amended) The reception apparatus according to claim 11, wherein:

the reception quality measurement section determines ~~finds~~ a reception field intensity ~~that serves~~ as a control reference in transmit power control for time slots, from the reception quality of individual time slots; and

the gain estimation section estimates the reception field intensities of individual time slots of the later received frame ~~that is going to be received~~, from the reception field intensity and transmit power information of individual time slots of the earlier received frame ~~that has been received earlier~~, the transmit power information being included in demodulated data of the earlier received frame ~~that has been received earlier~~, and the gain estimation section further estimates the gains of individual time slots according to the reception field intensities of the time slots of the later received frame ~~that is going to be received~~.

13. (Currently Amended) The reception apparatus according to claim 11, wherein, when a difference between an average gain of the gains of individual time slots in a reception period of the earlier received frame ~~that has been received earlier~~, and a minimum gain among the gains of

individual time slots in the reception period of the earlier received frame ~~that has been received earlier~~, is equal to or greater than a threshold, the gain estimation section estimates the gains of individual time slots of the later received frame ~~that is going to be received~~, by excluding a measurement value of the time slot of the minimum gain.

14. (Currently Amended) The reception apparatus according to claim 11, wherein, when a difference between a maximum gain among the gains of individual time slots in a reception period of the earlier received frame ~~that has been received earlier~~, and a minimum gain among the gains of individual time slots in the reception period of the earlier received frame ~~that has been received earlier~~, is equal to or greater than a threshold, the gain estimation section estimates the gains of individual time slots of the later received frame ~~that is going to be received~~, by excluding a measurement value of the time slot of the minimum gain.

15. (Previously Presented) The reception apparatus according to claim 12, wherein the gain estimation section subtracts increment and decrement values of transmit power indicated in the transmit power information from the reception field intensity on a per time slot basis and estimates transmit powers of individual time slots, and estimates the gains of individual time slots for amplifying a received signal of an estimated transmit power to the predetermined reference value.

16. (Currently Amended) The reception apparatus according to claim 12, wherein:

the gain estimation section sequentially sets the gains for amplifying a received signal to the predetermined reference value through a plurality of stages, in the reception period of the later received frame ~~that is going to be received~~, on a per stage basis, such that a gain in an earlier stage in the plurality of stages is equal to or greater than a gain in a later stage; and

the gain control section performs gain control of the received signal on a per stage basis in the reception period of the later received frame ~~that is going to be received~~, using the gains of individual stages set by ~~in~~ the gain estimation section.

17. (Currently Amended) A direct conversion reception method for use in a system where transmit power varies between transmission signals by downlink transmit power control, the method comprising the steps of:

measuring ~~finding~~ reception quality of a first signal of an earlier received ~~[[a]]~~ frame that is comprised of a plurality of time slots ~~and has been received earlier~~, the reception quality being measured ~~found~~ on a per time slot basis;

estimating gains for amplifying a second signal of a later received frame, the gains being estimated on a per time slot basis, before a reception period of the later received frame, based on the measured reception quality of individual time slots, gains for amplifying a signal of a frame that is going to be received; and the second signal being amplified to a predetermined reference value; before a reception period of the signal that is going to be received, the gains being estimated on a per time slot basis;

selecting, on a per frame basis, a maximum gain in a same frame, from the estimated gains of individual time slots; and, using the gains of individual time slots,

performing gain control, on a per time slot basis, during the reception period of the later received frame ~~that is going to be received, on a per time slot basis~~; and

calibrating an offset voltage of the second signal of the later received frame ~~that is going to be received~~, on a per frame basis, before the reception period of the later received frame ~~that is going to be received~~, using a calibration value matching the selected maximum gain selected.

18. (Currently Amended) The direct conversion reception method according to claim 17, further comprising wherein:

determining a reception field intensity ~~that serves as a control reference in transmit power control for time slots, is found~~ from the reception quality of individual time slots; and

estimating the reception field intensities of individual ~~the~~ time slots of the later received frame, ~~that is going to be received are estimated~~ from the reception field intensity and transmit power information of individual time slots of the earlier received frame ~~that has been received earlier~~, the transmit power information being included in demodulated data of the earlier received frame ~~that has been received earlier~~, wherein and

the gains of individual time slots are estimated according to the reception field intensities of the time slots of the later received frame ~~that is going to be received~~.

19. (Currently Amended) A semiconductor integrated circuit apparatus in a direct conversion reception apparatus for use in a system where transmit power varies between transmission signals by downlink transmit power control, the semiconductor integrated circuit apparatus comprising:

a reception quality measurement circuit that measures ~~finds~~ reception quality of a first signal of an earlier received ~~[[a]]~~ frame that is comprised of a plurality of time slots ~~and has been received earlier~~, the reception quality being measured ~~found~~ on a per time slot basis;

a gain estimation circuit that estimates gains for amplifying a second signal of a later received frame, the gains being estimated on a per time slot basis, before a reception period of the later received frame, based on the reception quality of individual time slots measured by ~~found in~~ the reception quality measurement circuit, gains for amplifying a signal of a frame that is going to be received, and the second signal being amplified to a predetermined reference value, ~~before a reception period of the signal that is going to be received, the gains being estimated on a per time slot basis;~~

a gain control circuit that selects, on a per frame basis, a maximum gain ~~in a same frame~~, from the gains of individual time slots estimated by ~~in~~ the gain estimation circuit, and, ~~using the gains of individual time slots~~, performs gain control, on a per time slot basis, during the reception period of the later received frame ~~that is going to be received, on a per time slot basis;~~ and

a voltage calibration circuit that calibrates an offset voltage of the second signal of the later received frame ~~that is going to be received~~, on a per frame basis, before the reception period of the later received frame ~~that is going to be received~~, using a calibration value matching the maximum gain selected by ~~in~~ the gain control circuit.

20. (Currently Amended) The semiconductor integrated circuit apparatus according to claim 19, wherein:

the reception quality measurement circuit determines ~~finds~~ a reception field intensity that ~~serves~~ as a control reference in transmit power control for time slots, from the reception quality of individual time slots; and

the gain estimation circuit estimates the reception field intensities of individual ~~the~~ time slots of the later received frame ~~that is going to be received~~, from the reception field intensity and transmit power information of individual time slots of the earlier received frame ~~that has been received earlier~~, the transmit power information being included in demodulated data of the earlier received frame ~~that has been received earlier~~, and the gain estimation circuit further estimates the gains of individual time slots according to the reception field intensities of the time slots of the later received frame ~~that is going to be received~~.